Seattle Public Utilities

Protecting Seattle's Waterways

Protecting Seattle's Waterways
Community Guide to the Plan

Issue 3 - Spring 2014

Integrated Plan Alternative: A closer look

The Plan to Protect Seattle's Waterways is Seattle Public Utilities' strategy to keep raw sewage and polluted runoff out of Seattle's lakes, creeks, and Puget Sound. This edition of the Community Guide provides a closer look at the Integrated Plan Alternative, one of the two alternatives Seattle Public Utilities is evaluating in the Plan to Protect Seattle's Waterways.

Look inside:

What is the Plan to Protect Seattle's Waterways?

The Plan to Protect Seattle's Waterways will outline Seattle Public Utilities' strategy to control sewage overflows and meet state and federal regulations. Seattle Public Utilities is evaluating two different alternatives in the Plan. One alternative - the Long-Term Control Plan - would address sewage overflows only and would have to be constructed by 2025 to meet state and federal regulations. The second alternative – the Integrated Plan – would address both sewage overflows and stormwater pollution, and is the focus of this Community Guide.

What is the Integrated Plan Alternative?

The Integrated Plan Alternative uses an integrated approach to reduce both sewage overflows and polluted stormwater runoff. Seattle Public Utilities would implement projects to address stormwater runoff in areas that are not part of the combined sewer system.

Seattle Public Utilities would also build sewage overflow reduction projects in 11 neighborhoods using one of the four options being evaluated in the Long-Term Control Plan Alternative, though some of these projects would be built after 2025. Go to www.seattle.gov/CSO to learn more about the four Long-Term Control Plan options.

Why consider the Integrated Plan Alternative?

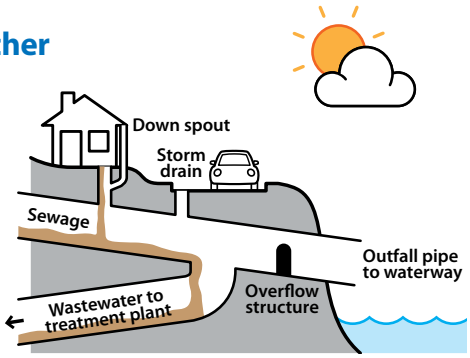
Previously, Seattle Public Utilities implemented sewage overflow control and stormwater management as separate and distinct programs. Recognizing that polluted runoff has a big impact on water quality, the City of Seattle negotiated an agreement, called a Consent Decree, which allows Seattle Public Utilities to prepare a plan that integrates sewage overflow reduction projects with stormwater control projects, to achieve greater environmental benefit than sewage overflow reduction alone.

What is a combined sewer overflow (CSO)?

Many Seattle neighborhoods have a sewer system that mixes raw sewage from our homes and businesses and polluted runoff from our roofs and streets in a single pipe – a "combined sewer."

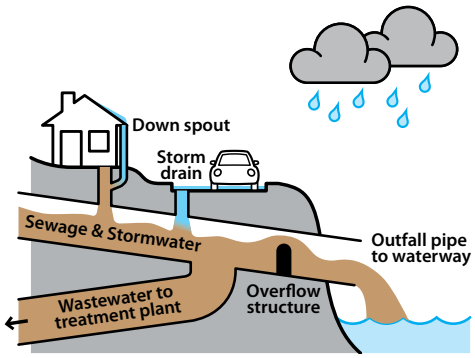
Dry Weather

During dry weather, sewage flows to the wastewater treatment plant.



Wet Weather

When it rains, polluted runoff overwhelms the pipe that carries raw sewage. The raw sewage and polluted runoff overflow into the nearest waterway.



Integrated Plan Alternative: How will it work?

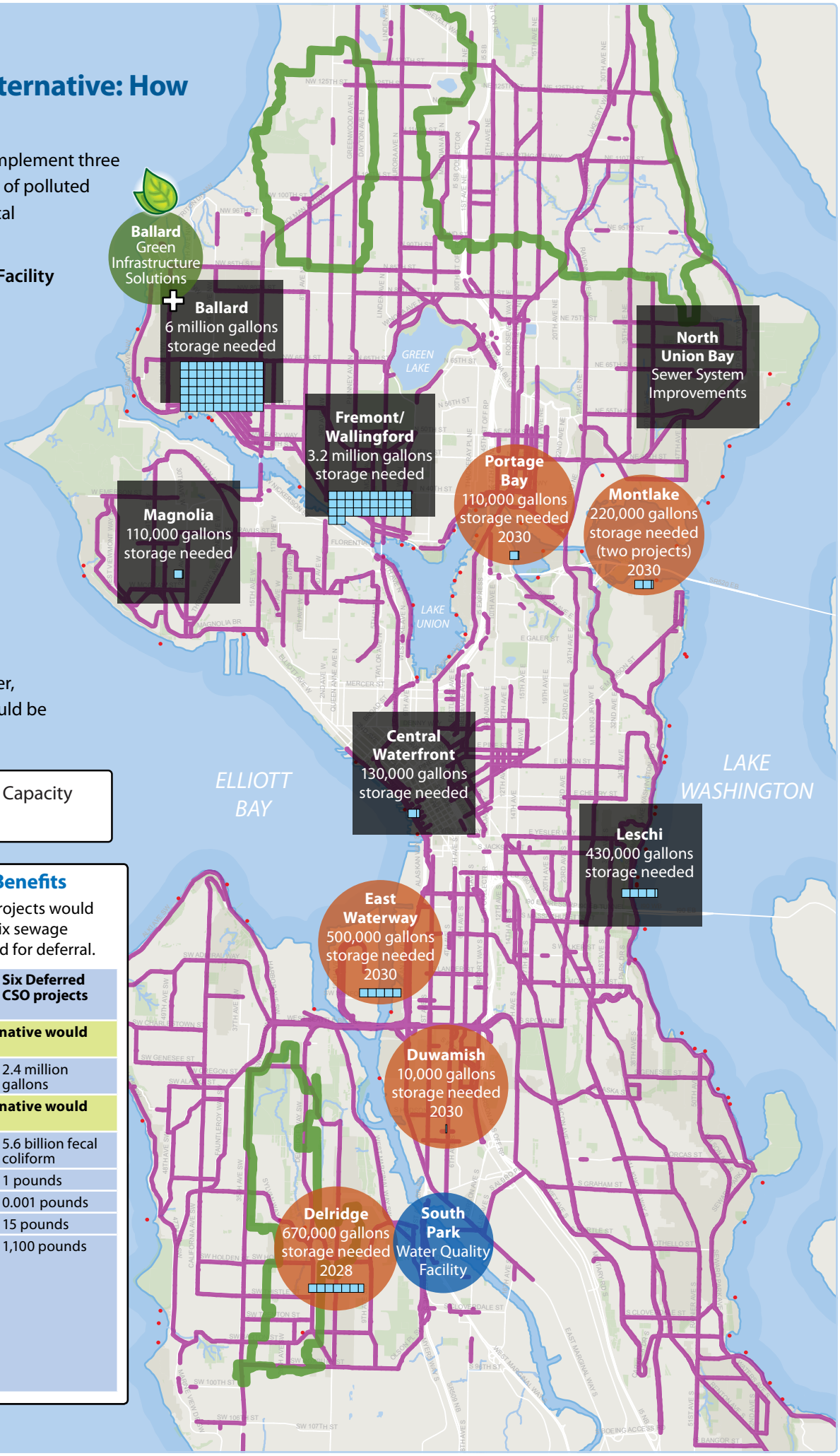
Seattle Public Utilities would implement three projects to reduce the amount of polluted stormwater runoff entering local waterways:

- **South Park Water Quality Facility**
- **Street Sweeping**
- **Natural Drainage Systems Partnering**

Seattle Public Utilities would also build combined sewer overflow control projects in 11 neighborhoods.

- Projects that address the largest, most frequent overflows would be built by 2025.
- Projects that address smaller, less frequent overflows would be built after 2025.

- 100,000 Gallons Storage Capacity
- SPU-Managed Outfalls



Comparing Water Quality Benefits

The three proposed stormwater projects would reduce more pollutants than the six sewage overflow control projects proposed for deferral.

	Three Stormwater Control Projects	Six Deferred CSO projects
Annually, the Integrated Plan Alternative would treat:		
	108 million gallons	2.4 million gallons
Annually, the Integrated Plan Alternative would remove:		
Fecal Coliform Bacteria	71 billion fecal coliform	5.6 billion fecal coliform
Zinc	100 pounds	1 pounds
PCBs	0.2 pounds	0.001 pounds
Phosphorus	150 pounds	15 pounds
Total Suspended Solids (TSS) - solids that are suspended in stormwater. Pollutants, such as PCBs tend to attach to the suspended solids in stormwater.	130,000 pounds	1,100 pounds

Arterial Street Sweeping Expansion

Street sweeping removes pollutants from Seattle's streets before they are carried by stormwater into the sewers and local waterways. Seattle Public Utilities would partner with the Seattle Department of Transportation to expand its existing arterial street sweeping program by adding new routes, increasing the frequency of sweeps, and extending the sweeping season. This flexible, citywide program is adaptable to meet future needs.

Street sweeping truck

Did you know?

Streets and sidewalks make up 16 percent of Seattle land use, but they generate about 44 percent of the pollution flowing into the drainage system and local waterways.

Why were these routes selected?

- **Reduces polluted runoff into waterways with known water quality issues**
- **Reduces polluted runoff into water that provides habitat for salmon and other threatened and endangered species**
- **Improves water quality near swimming beaches**
- **Supports clean-up efforts in the Duwamish River Superfund site**
- **Improves water quality in a waterway for which the State has issued fish consumption warnings**
- **Meets Seattle's service and equity goals**

Benefits

- **Prevents an additional 40 tons of pollutants from entering our local waterways**
- **Helps to reduce flooding by preventing clogged stormed drains**
- **Improves air quality and neighborhood cleanliness**

Street sweeping will help improve water quality in the following waterways:

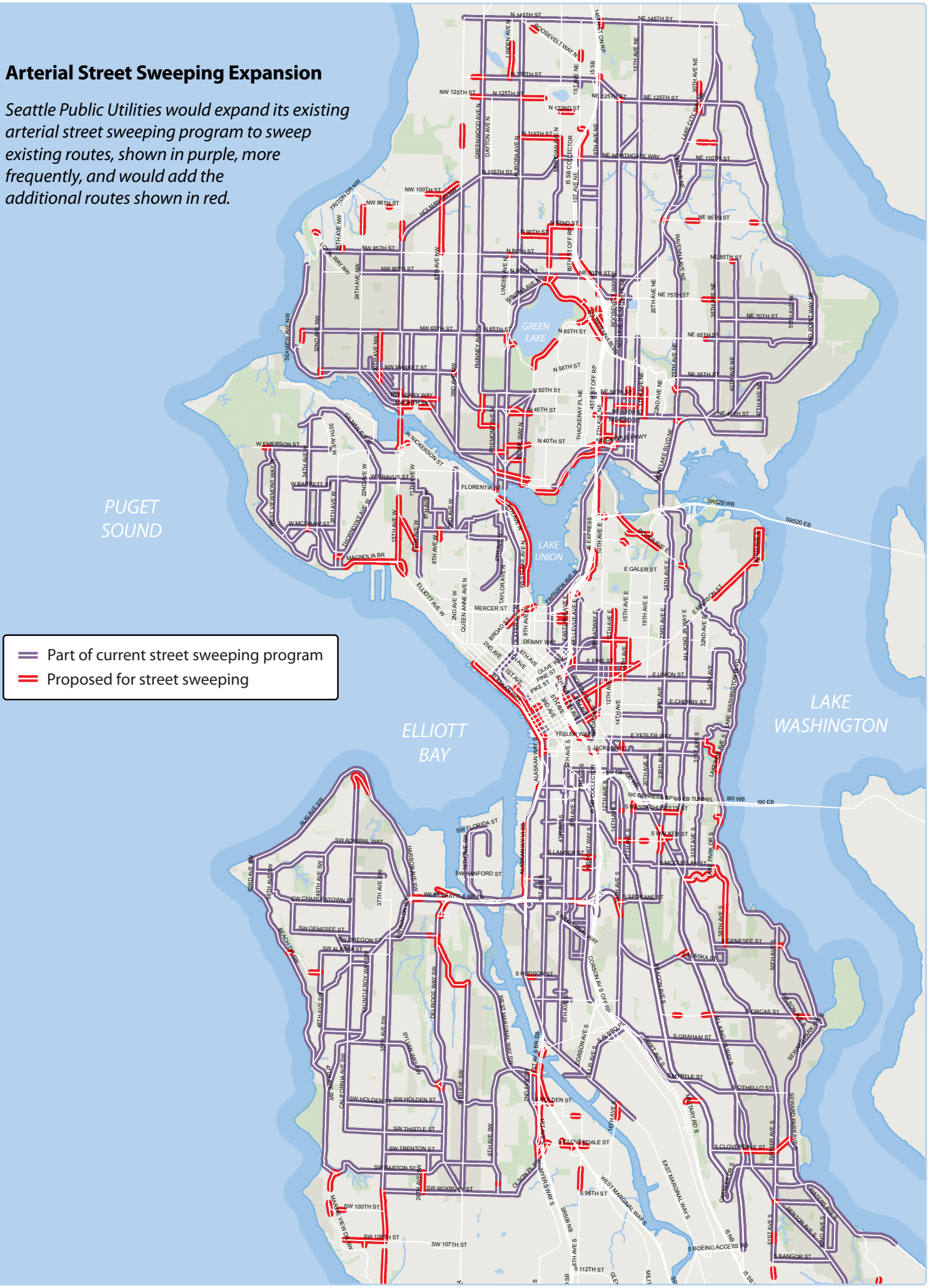
- **Duwamish River**
- **Puget Sound**
- **Elliott Bay**
- **Lake Washington**
- **Lake Union**
- **Thornton Creek**
- **Piper's Creek**
- **Longfellow Creek**

Timeline

Starting in 2016

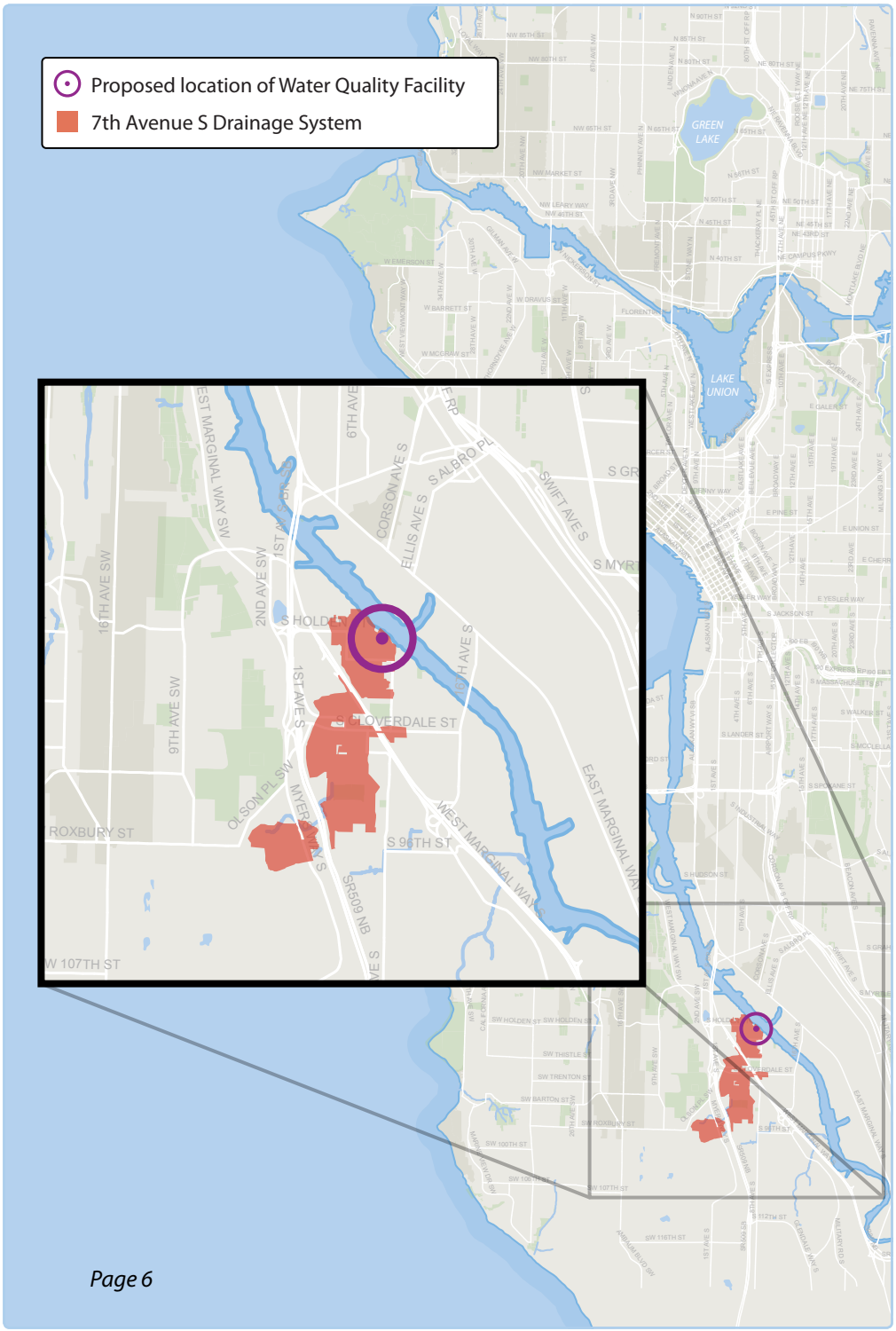
Arterial Street Sweeping Expansion

Seattle Public Utilities would expand its existing arterial street sweeping program to sweep existing routes, shown in purple, more frequently, and would add the additional routes shown in red.



South Park Water Quality Facility

The South Park Water Quality Facility would remove pollutants from approximately 90 million gallons of stormwater each year across 250 acres. The facility would be built in the same location as a new stormwater pump station Seattle Public Utilities plans to build to reduce flooding in the same area. Co-locating the water quality facility and the new pump station allows Seattle Public Utilities to address both water quality and local flooding in South Park.



How does it work?

Stormwater will be routed through a filtration system to remove a variety of pollutants. Treated stormwater would be released through the existing outfall to the Lower Duwamish Waterway.

Project Benefits

- **Improves water quality in the Duwamish, which has known water quality issues**
- **Reduces stormwater runoff into water that provides habitat for salmon and other threatened and endangered species**
- **Supports clean up efforts in the Duwamish River Superfund site**
- **Improves water quality in a waterbody for which the State has issued fish consumption warnings**
- **Meets Seattle's service and equity goals**

This project will help improve water quality in the following waterways:

- **Duwamish River**

Timeline

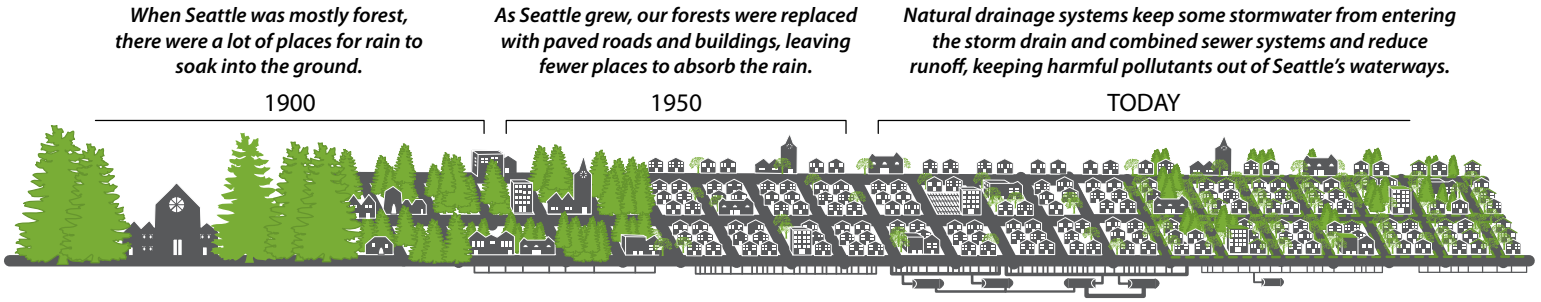
Design . . . . . **2018 - 2020**
Construction . . . . . **2021 - 2024**
Facility opens **2024**

Natural Drainage Systems Partnering

Seattle Public Utilities would work with local residents and community groups to identify areas to build natural drainage systems within the Piper's Creek, Thornton Creek, and Longfellow Creek watersheds. These projects would treat up to 35 million gallons of polluted runoff each year, depending on the number of projects built.

How does it work?

Natural drainage systems help to manage stormwater like a forest by slowing the flow, cleaning the polluted runoff, and allowing it to soak into the ground.



What does it look like?

A rain garden is an example of a natural drainage system. Rain gardens use plants to help clean and absorb stormwater into the ground before it flows into the storm drain system. Rain gardens can be built in the public right-of-way, such as the planting strip in front of a home or business or on private property.

Natural drainage systems slow the flow of stormwater and filter out pollutants. They also provide co-benefits such as traffic calming or the addition of sidewalks and curbs where none exist.

Broadview Green Grid, 2004

Why were these blocks selected?

- **Runoff from the street flows to a creek**
- **Streets are not steep (less than seven percent slope)**
- **Areas where water can safely soak into the soil (not within steep slopes, no landslide potential, or no known soil contamination)**

Project Benefits

- **Improves water quality in Thornton, Piper's, and Longfellow creeks, which have known water quality issues**
- **Reduces stormwater runoff into water that provides habitat for salmon and other threatened and endangered species**
- **Meets Seattle's service and equity goals**
- **Channels stormwater where no formal drainage system exists**

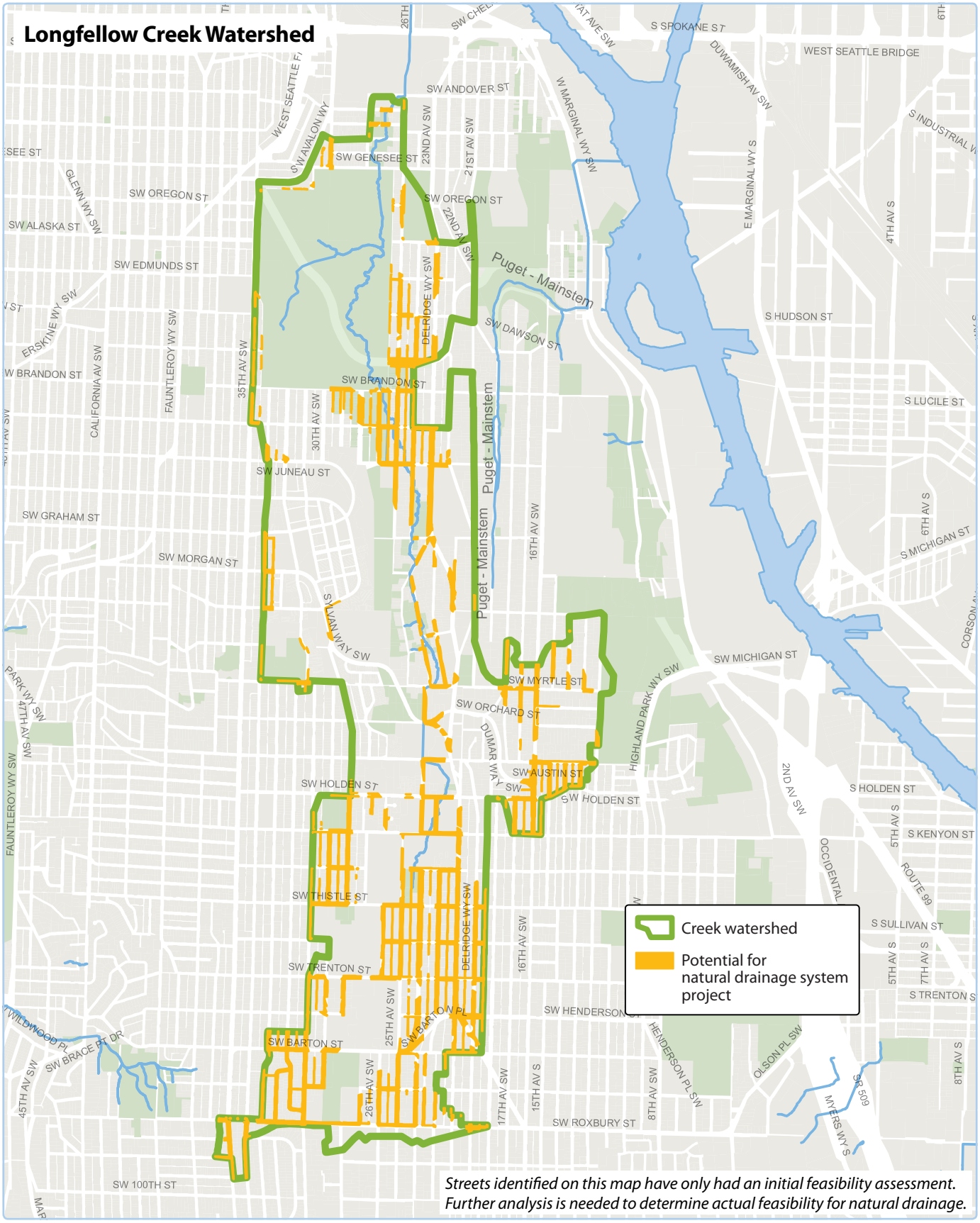
Natural Drainage Systems Partnering will help improve water quality in the following waterways:

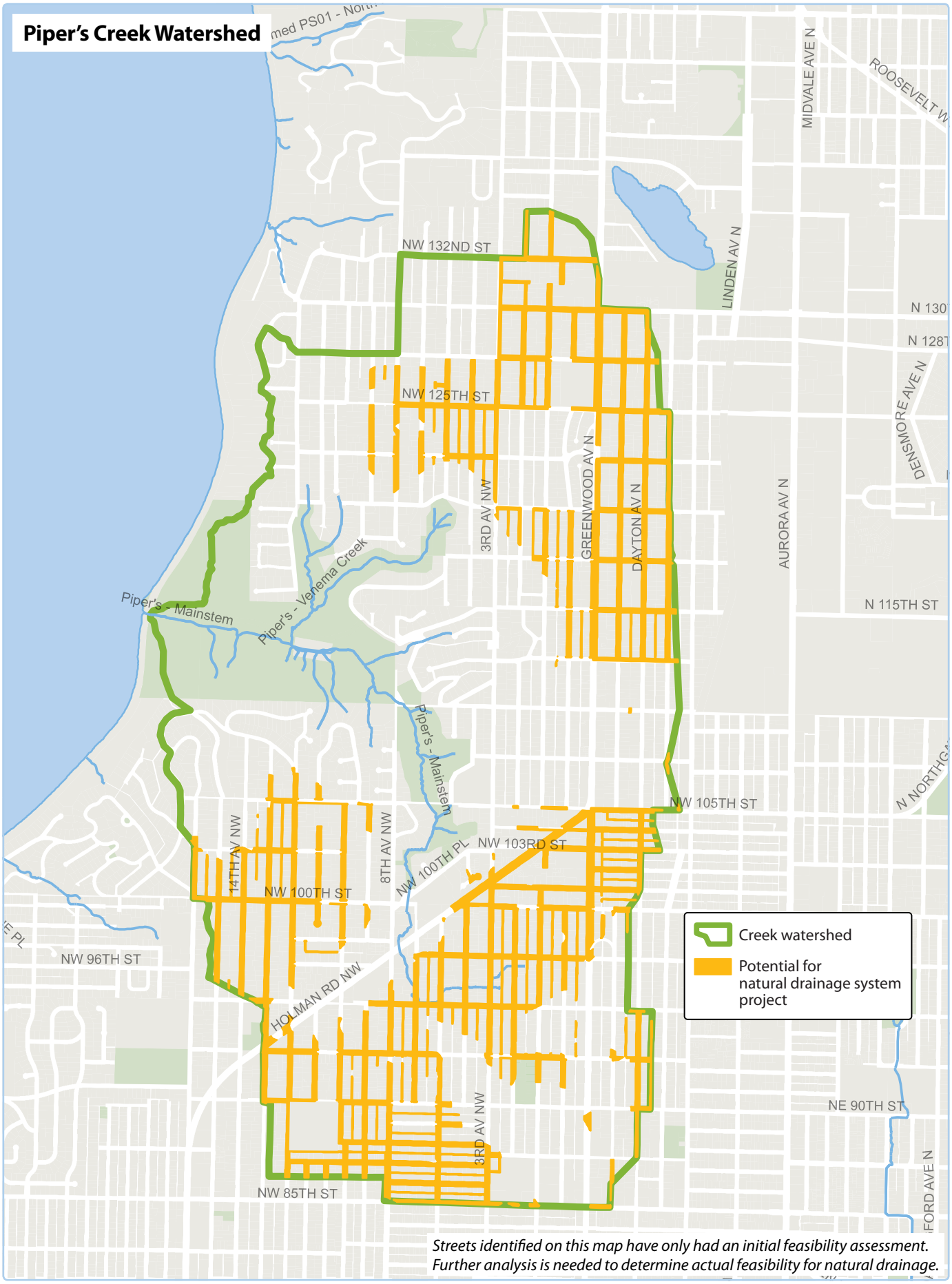
- **Longfellow Creek**
- **Piper's Creek**
- **Thornton Creek**

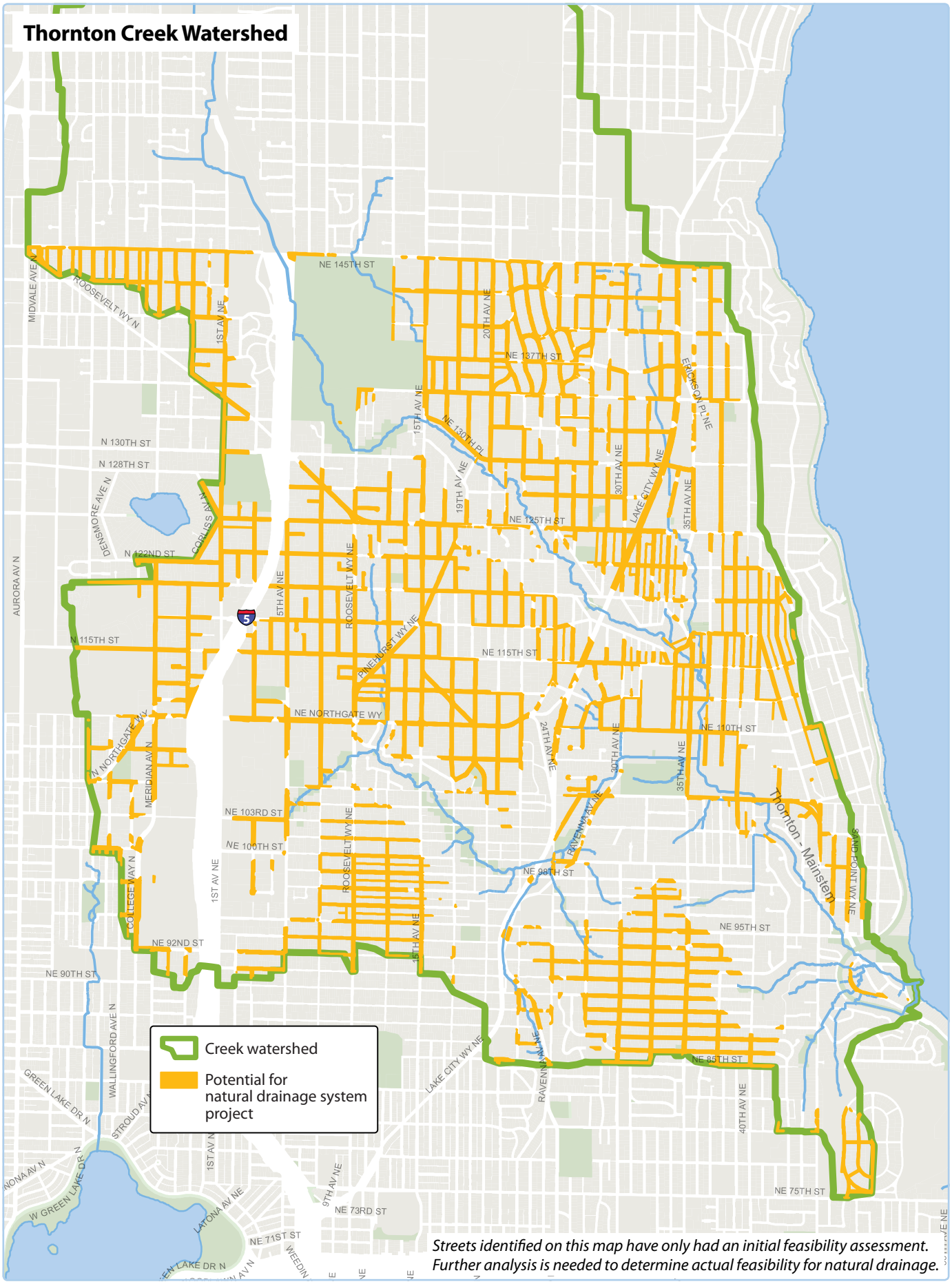
Timeline

Design ..... **2017 - 2023**
Construction ..... **2019 - 2025**
Facilities open ..... **2020 - 2025**

Seattle Public Utilities would work in partnership with local residents and community groups to identify areas to build natural drainage systems projects within the Piper's Creek, Thornton Creek, and Longfellow Creek drainage basins. The more blocks that participate, the greater the water quality improvements that can be achieved.




Piper's Creek Watershed
NW 132ND ST
NW 125TH ST
LINDEN AV N
MIDVALE AVE N
ROOSEVELT W
N 130
N 128
DENSMORE AVE N
3RD AV NW
GREENWOOD AV N
DAYTON AV N
AURORA AV N
N 115TH ST
Piper's - Mainstem
Piper's - Venema Creek
Piper's - Mainstem
NW 105TH ST
N NORTHG
NW 103RD ST
NW 100TH PL
NW 100TH ST
14TH AV NW
8TH AV NW
NW 96TH ST
HOLMAN RD NW
NE 90TH ST
3RD AV NW
NW 85TH ST
FORD AVE N
Creek watershed
Potential for natural drainage system project
Streets identified on this map have only had an initial feasibility assessment.
Further analysis is needed to determine actual feasibility for natural drainage.


Thornton Creek Watershed
Creek watershed
Potential for natural drainage system project
Thornton - Mainstem
NE 145TH ST
NE 137TH ST
NE 130TH PL
NE 125TH ST
NE 115TH ST
NE NORTHGATE WY
NE 110TH ST
NE 103RD ST
NE 100TH ST
NE 98TH ST
NE 95TH ST
NE 92ND ST
NE 90TH ST
NE 85TH ST
NE 75TH ST
NE 73RD ST
NE 71ST ST
N 130TH ST
N 128TH ST
N 122ND ST
N 115TH ST
ROOSEVELT WY N
MIDVALE AVE N
AURORA AV N
DENSMORE AVE N
CORLISS AV N
MERIDIAN AV N
COLLEGE WAY N
N NORTHGATE WY
GREEN LAKE DR N
WALLINGFORD AVE N
STROUD AV N
W GREEN LAKE DR N
NONA AV N
LATONA AV NE
1ST AV NE
5TH AV NE
9TH AV NE
15TH AV NE
19TH AV NE
20TH AV NE
24TH AV NE
30TH AV NE
35TH AV NE
40TH AV NE
ROOSEVELT WY NE
PINEHURST WY NE
LAKE CITY WY NE
RAVENNA AV NE
ERICKSON PL NE
SAND POINT WY NE
Streets identified on this map have only had an initial feasibility assessment. Further analysis is needed to determine actual feasibility for natural drainage.

What's Next?

Plan and Draft EIS to be released in spring 2014

Seattle Public Utilities will release the Draft Plan to Protect Seattle's Waterways in spring 2014 and offer a 30-day public comment period. The Draft Plan contains a Programmatic Environmental Impact Statement, which evaluates the impacts associated with adopting and implementing either of the two Plan alternatives: (1) the Long Term Control Plan, and (2) the Integrated Plan. The EIS also includes an evaluation of a No Action Alternative, as required by the State Environmental Policy Act (SEPA). A public meeting on the Draft Long-Term Control Plan/Integrated Plan and public hearing on the Draft EIS is set for Tuesday, June 24, 2014 at 6 p.m. at the Lake Washington Rowing Club, 910 N. Northlake Way, Seattle, WA 98103.

Seattle Public Utilities encourages the public, interested agencies, and Tribal governments to review and comment on the Plan, proposed alternatives, and potential impacts.

What information will be provided in the Plan to Protect Seattle's Waterways?

The Plan will:

- **Identify areas of Seattle where projects are needed to reduce combined sewer overflows.**
- **Evaluate alternatives for reducing sewage overflows in these areas.**
- **Identify additional areas where projects to control and treat polluted stormwater runoff will improve water quality.**
- **Recommend a schedule for designing and constructing projects.**
- **Estimate program costs and associated impacts on Seattle Public Utilities' customer bills.**

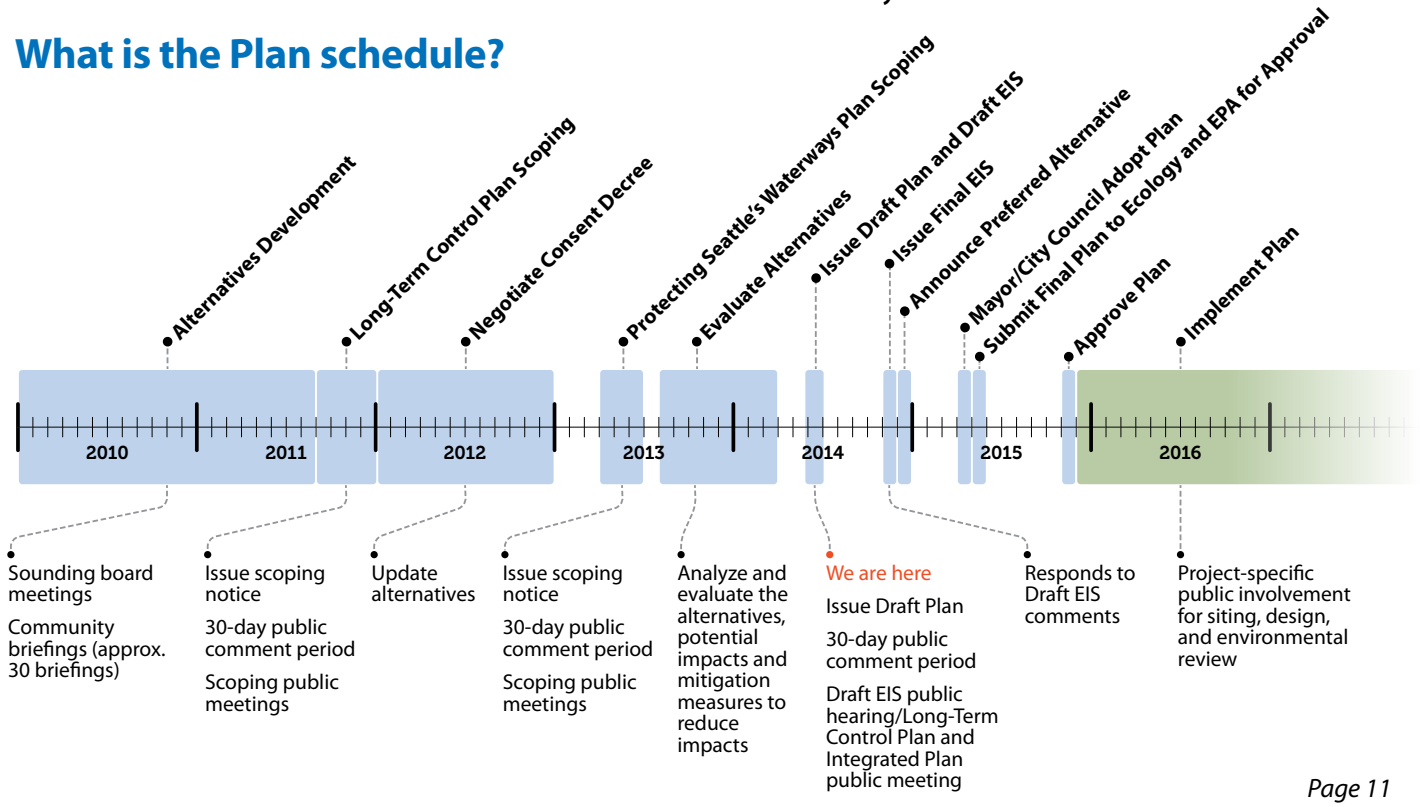
What will the EIS Evaluate?

Seattle Public Utilities is preparing the EIS under the State Environmental Policy Act (SEPA) to analyze how the Plan could affect the environment. The Draft EIS will identify and describe potential environmental impacts of the alternatives under consideration and propose actions that will help mitigate unavoidable impacts.

Seattle Public Utilities will discuss the following environmental issues in detail in the EIS:

- **Transportation, particularly construction-related traffic impacts**
- **Recreation, including potential impacts to parks and open spaces**
- **Land and shoreline use**
- **Historic and cultural resources**
- **Public safety and environmental health**

What is the Plan schedule?



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For more information:

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Visit our website: *www.seattle.gov/CSO*

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Về dịch vụ phiên dịch xin gọi 206-733-9195

Real-Time Combined Sewer Overflow Reports

King County and the City of Seattle provide real-time reports when combined sewer overflows happen. To view the map, go to *www.seattle.gov/CSO*. Click on "Real Time Reports of Raw Sewage Overflows".

Sewage overflows happen along shorelines in Seattle where pipes carry both sewage and stormwater during heavy rains. During the overflow, and for at least 48 hours afterward, people should avoid contact with the water near the outfalls.

The web information is updated regularly, to provide the fastest notification possible. Warning signs are also posted at each outfall.

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